# P2Times

**DECAM Bi-Annual Pollution Prevention (P2) Newsletter**
**December 2004, Issue 34**

*(The December edition of the* P2 Times *is published to provide Soldiers and staff on Fort Carson with an annual wrap up of pollution prevention (P2) accomplishments for the year.)*

DECAM courtesy photos

Racked POL dispensing systems are being installed at unit motorpools.

## P2 Equipment for Soldiers

The Fort Carson DECAM identified a recurrence of environmental issues in motor pools that could be improved through equipment purchases and funded several projects in FY04 to assist the Soldier, help prevent pollution and improve environmental compliance while enhancing operator safety and efficiency. The equipment purchases included:

- ***60 spill kits*** (for responding to emergency spills)
- ***90 oil drain evacuation systems*** (for capturing used oil from draining vehicles)
- ***70 dry sweep dispensing carts*** (for wheeling dry sweep to spills and recycling unused dry sweep)
- ***75 drain and contain pourable drip pans*** (for safely capturing used oil from draining vehicles)
- ***12 racked petroleum, oil and lubricant (POL) dispensing systems*** (for storing and dispensing POLs)
- ***12 portable Flexiwall containment berms*** (for temporary secondary containment of fuelers)

process during the pilot projects to use as a tool to train other installations about deconstruction.

- ***50 poly spill pads*** (for storing batteries off the floor)
- ***40 poly four-drum spill pallets*** (for storing drums with 85 gallons of secondary containment capacity)
- ***80 drum funnels with lids*** (for oil filter draining)

*(Note: Several of these spill kit equipment items have not yet been issued to unit motorpools and are available for issue. For information, call the Fort Carson Pollution Prevention Coordinator at 526-1739.)*

Building 6286, a part of the Old Hospital Complex, was the first building deconstructed during the pilot project.

## Deconstruction Project

In November 2003, staff from the U.S. Army Corps of Engineers (USACE) Construction Engineering Research Laboratory (CERL) and Fort Knox, Ky., were invited to visit Fort Carson and discuss opportunities associated with building deconstruction, which is the systematic taking down of building materials instead of straight demolition. The meeting generated the momentum to coordinate a pilot building deconstruction project for Fort Carson to see if deconstruction could be profitable or at least equal in price to building demolition. By partnering with USACE CERL, the Directorate of Environmental Compliance and Management (DECAM), deconstruction subcontractors and the Directorate of Public Works (DPW), three buildings were deconstructed and eventually evaluated in a report as to the cost effectiveness and potential waste diversion.

- The first building deconstructed, Bldg. 6286, had approximately a 40 percent diversion of materials from the landfill while the second two pilot buildings (Bldgs. 226 and 227) had approximately an 80 percent diversion of materials with similar savings of disposal costs.
- In total, about 280 tons of material (mainly wood and concrete but also metal, windows and ceiling tiles) was diverted from going to a landfill.
- While cost data is not yet available from the pilot study, deconstruction at other Army posts has been found to create new jobs in communities and save installations money, while diverting reusable construction materials from landfills. A local, fledgling deconstruction company, whose hiring practices include providing quality jobs and training to underemployed segments of the local community, was one of the subcontractors piloting the deconstruction project.
- The deconstruction project also offered USACE CERL the opportunity to videotape the deconstruction

## Parts Washer Solvent Distillation

Fort Carson had two distillation units installed in FY04 at the parts washer maintenance shop, Bldg. 3711. The DECAM maintains approximately 125 parts washer and weapons cleaners across the installation while another 100 are maintained by Safety Kleen. Solvent from the distillation units can be removed from the parts washers, cleaned through distillation and placed back into the parts washers. The distilled solvent is not altered by the distillation process, which can be carried on repeatedly. For each 15-gallon batch of Breakthrough solvent distilled, approximately 14 gallons (93 percent) are being returned and cleaned so well that it is considered new product. The other gallon is mostly waste such as grease, oil and other contaminants.

Each of the 125 DECAM owned parts washer holds 25-40 gallons of solvent and should be changed every six months to two years. Disposal of parts washer solvent would cost about $12/gallon. Fort Carson avoids spending from $37,500 to $60,000 every six months to two years by recycling the solvent.

## Biodiesel/ Alternative Fuel Initiative

The use of alternative fuel vehicles (AFV) has been underway at Fort Carson for several years at its Transportation Motor Pool (TMP). Currently 49 percent of the TMP fleet is comprised of AFVs. The AFVs run on compressed natural gas, diesel, combination fuels and several are gas/electric hybrids. The biodiesel initiative took the use of alternative fuels a step further in FY04 when seven Directorate of Logistics (DOL) vehicles were upgraded to run on biodiesel, a 1,000 gallon storage convault was moved to the main DOL facility to store biodiesel and 1,000 gallons of B20 (20 percent biodiesel, 80 percent petroleum based) biodiesel was purchased.

The purpose of the biodiesel pilot project was to see how biodiesel would affect motor operations. To date, all feedback has been positive. Vehicles are starting quicker and running cleaner (less emissions) and biodiesel is also currently comparable in cost to diesel.

## Transition to less hazardous paint

As part of extensive P2, air quality and sustainability efforts underway, the DECAM was able to work with DOL in FY04 to convert their vehicle paint booth to a low volatile organic compound (VOC), zero hazardous air pollutant (HAP) chemical agent resistant coating (CARC) paint. The new 1.5 CARC paint emits almost 60 percent less VOCs than the 3.5 CARC paint used in the past and virtually eliminates the HAPs from painting. Both are very important issues when negotiating air permits with the Colorado Department of Public Health and Environment.

There have been no negative operational impacts from this switch over and painting performance is meeting all standards. As a result of the conversion from CARC paint, the DOL is now reviewing an opportunity to convert to a less toxic, biodegradable solvent for paint cleaning as opposed to the use of Methyl Ethyl Ketone (MEK). The 3.5 CARC paint was too thick and had to be cut with MEK before application to a vehicle. With the new 1.5 CARC paint cutting is no longer required. A large amount of MEK also had to be used in clean up.

Some of MEK use reductions are already apparent and Fort Carson is striving to reduce the disposal requirements of this toxic product in the near future through the purchase of MEK distillation equipment to enable reuse.

For more information about these or other P2 initiatives or to submit a pollution prevention idea, contact the P2/Energy Specialist at 526-1739.